

Entrepreneurial Finance in Turkey: A Comparison of German Entrepreneurial Index (GEX) with Borsa Istanbul Emerging Companies Market (ECM)

Türkiye'de Girişimcilik Finansmanı: Alman Girişimcilik Endeksi (GEX) ile Borsa İstanbul Gelişen İşletmeler Piyasasının (GİP) Karşılaştırılması

Çiydem ÇATAK, Türk Alman Üniversitesi, Türkiye, catak@tau.edu.tr
Orcid No: 0000-0001-7501-5969

Abstract: Small and medium-sized enterprises have many unique features that distinguish them from large businesses. Because of these features, the management and financing of these companies also differ. Due to different financing sources and different financial management "Entrepreneurial Finance" has emerged and has addressed the financing decisions of entrepreneurs. This study attempts to explain the development of entrepreneurial financing in Turkey. It also discusses the emergence of new sources of funding, such as entrepreneurial indices created for small and medium-sized enterprises. In addition, it compares the German Entrepreneurial Index with Borsa Istanbul Emerging Companies Market, and highlights common and different aspects of these two indices. It is concluded that entrepreneurial indices help small and mid-sized companies to access external funding.

*Keywords: Entrepreneurial finance, SMEs, GEX, ECM
JEL Classification: M13, G10, G15*

Öz: Küçük ve orta ölçekli işletmeleri büyük işletmelerden ayıran birçok özellik mevcuttur. Bu kendine has özellikler, küçük ve orta ölçekli işletmelerin yönetim ve finansmanını da farklılaştırmıştır. Finansmana erişim olanaklarında ve kurumsal yönetimde var olan bu farklılıklar sebebiyle "Girişimcilik Finansmanı" ortaya çıkmış ve girişimcilerin finansman kararlarını ele almıştır. Bu çalışma, Türkiye'de girişimcilik finansmanının gelişimini açıklamaya çalışmaktadır. Küçük ve orta ölçekli işletmeler için geliştirilen girişimcilik endeksleri gibi yeni finansman kaynaklarının ortaya çıkışı incelenmiştir. Ayrıca, Alman Girişimcilik Endeksi ile Borsa İstanbul Gelişen İşletmeler Piyasası karşılaştırılmış ve bu iki endeksin ortak ve farklı yönleri vurgulanmıştır. Girişimcilik endekslerinin küçük ve orta ölçekli firmaların dış finansmana erişimini kolaylaştırdığı sonucuna varılmıştır.

*Anahtar Sözcükler: Girişimcilik finansmanı, KOBİ, GEX, GİP
JEL Sınıflandırması: M13, G10, G15*

1. Introduction

The contribution of small and medium-sized enterprises (SMEs) to economic growth cannot be ignored. Despite the fact that they have many problems such as difficulties with using high technology, limited management capability, low productivity and high costs, lack of financing and difficulty of accessing financing, they create new ventures, generate new employment opportunities, and increase competition. Although SMEs are defined differently in every country and even in different regions of a country, it is defined by Small and Medium Sized Industry Development Organization (KOSGEB)¹ as the economic units or initiatives which employ less than two-hundred fifty persons and whose annual net sales revenue or financial balance don't exceed 40 million TRY. SMEs are seen as the key sources of innovation and economic growth and therefore great importance is given to these initiatives in many countries.

In Turkey, SMEs accounted for 99.8% of the total number of enterprises in 2014. In addition they accounted for 74.2% of the employed in the labor market, 54.7% of the salaries and wages, 52.8% of the value added factor and 53.3% of the gross investment in property (TUIK, 2015). As can be seen from these figures, SMEs play an important role in Turkish economy due to high number of enterprises and high employment share. Although the exact number is not quantified, most of the SMEs in Turkey are family-owned companies. There are small and medium-sized family companies as well as very large-scale family businesses in Turkey. A brief look at the Turkish economic history shows that the first large family-owned companies, such as Sabancı, have already acted globally. Nevertheless, this multinational corporation still has its seat in Turkey. This mix of small and large regionally rooted and internationally operating family businesses play a very important role in moving the local economy one step forward and distinguishes the local economies from that of other countries. The high rate of family entrepreneurs is a crucial factor, especially in the case of developing economies, to catch-up with advanced economies.

In addition, it has become clear that SMEs are less affected by severe economic conditions than bigger companies when the economy is deteriorating, and therefore have a stabilizing effect. For example, the study of Birch (1990) shows that during the time that Fortune 500 companies lost 4 million jobs in 1980s, firms that had less than 100 employees

¹ Small and Medium Enterprises Development and Support Administration

Makale Geçmişi / Article History

Başvuru Tarihi / Date of Application : 24 Nisan / April 2019

Kabul Tarihi / Acceptance Date : 8 Ekim / October 2019

created 16 million jobs. In another study which was published by Center for European Economic Research and the Institute for SME Research (2017), the 500 largest family businesses increased the number of their employees in Germany by 19 % from the period 2006 to 2014, a time when most economies saw recessions and economic turmoil. On the other hand, non-family-owned companies in Germany only saw an increase of 2% in the number of employees during the same period. In 2014, more than 22.3 million SMEs in the European Union employ 90 million people, which accounts for around 66.9% of the total employment and 57.8% of total value added (European Small Business Finance Outlook June 2016). In another study Beck et al. (2005) find a positive relation between the size of SMEs and economic growth while controlling for other growth variables. And in a similar study Ayyagari et al. (2007) conclude that in high income countries SMEs contribute to 50 % of GDP on average.

SMEs have found many ways to find financing. One of them is the increase of capital through public offering. The perception that public companies are financially stronger has led these companies to open their shares to the public so as not to fall into a disadvantageous position. As mentioned before, these companies are different from big companies and therefore it is not surprising that there is a special index for these companies. In line with the development of entrepreneurial indices, Borsa Istanbul Emerging Companies Market (ECM) was established to meet financing needs of Turkish SMEs. The development of this index aims to facilitate the financing needs of small and medium-sized enterprises. The purpose of this study is to provide general information about the Borsa Istanbul Emerging Companies Market and compare it to the German Entrepreneurial Index (GEX).

There is no broad literature providing explanations on the development of entrepreneurial finance in Turkey. The current work adds to the literature by explaining the emergence of new sources of funding such as entrepreneurial indices for SMEs. The remaining part of the paper is as follows. Second section provides the definition of entrepreneurial finance. Third section informs the reader about entrepreneurial finance in Turkey. Fourth section contains information about German Entrepreneurship Index. Fifth section explains the development process of Borsa Istanbul Emerging Companies Market. In the last section, a comparison between the GEX and ECM is made and concluding remarks are provided.

2. Entrepreneurial Finance

Entrepreneurial Finance has emerged as a third area of finance for small businesses, together with corporate and behavioral finance. In fact, it is only about applying basic financial principles and basic theories in the field of new and small businesses. Entrepreneurial firms differ from large firms in four different ways. First, they grow fast and therefore spend more cash than they create. Second, external financing is difficult for such firms because of having excessive amount of intangible assets which consist of patents, software and other intangible assets. Third, most of these companies are trying to do something new and untested, which increases the risk of bankruptcy. And finally, for minimizing the claims on the firm's current cash flows, these firms must have highly skilled technical and entrepreneurial talent (Smart, Megginson and Gitman, 2006).

One of the most important problems facing entrepreneurial firms is finding capital. The lack of cash flows as well as asymmetric information and agency problems in these businesses reduce the banks' desire to lend. Except those, costs related to bank's capital position and risk on the collateral demanded can be shown as the reasons for tightening credit conditions. (European Small Business Finance Outlook June 2016). As an alternative to bank loans, venture capitalists and angel investors emerged to support SMEs in terms of credit.

Angel investors and venture capitalists are most known sources of funding for SMEs. Denis (2004) defines angel investors as individuals that have high net worth and want to invest their money in small companies. Essentially, for angel investors in order to be seen as a source of funding, the companies they provide capital to must be newly established. Wong (2002) indicates that angel investors fund smaller amounts than venture capitalists and mentions a negative relation between the number of angel investor and the time to venture financing. That means as companies' financing needs continue to remain small, the likelihood of choosing venture capital falls. Unlike angel investors, venture capitalist play an influential role in the company, which they provide capital to. They don't only provide equity capital, but also manager assistance, performance monitoring and high quality information flow that especially prevent agency problems (OECD, 2000). On the other hand, angel investors usually make local investments, while venture capital firms also make international investments. The differences between angel investors and venture capitalists are shown in detail in Table 1.

Tablo 1. Differences between Angel Investors and Venture Capitalists

<i>Angel Investors</i>	<i>Venture Capitalists</i>
<i>Individuals investing their own money</i>	<i>Companies and fund managers investing other people's money</i>
<i>Investing early-stage or start-up businesses</i>	<i>Investing early-stage and later-stage businesses but usually later-stage</i>

<i>Size of financing is small</i>	<i>Size of financing is large</i>
<i>Share personal experience</i>	<i>Give professional help in every field</i>
<i>Less concerned about the rate of return</i>	<i>Rate of return is very important</i>
<i>Investments are local</i>	<i>Investments are national</i>

Source: Cumming 2010

3. Entrepreneurial Finance in Turkey

The amount of SME loans in total bank lending in Turkey is quite low. One of the main reason for this is that these businesses are usually family businesses. Such companies can have problem with institutionalization arising from the fact that both the owner and the manager are the same person. Consequently, this can cause the bank to give smaller loans at high interest rates to SMEs. Figure 1 shows the development of credit types in Turkey. In March 2017 commercial and corporate loans amounted to TL 948 billion, SME loans amounted to TL 448 billion and consumer loans and credit cards amounted to TL 434 billion.

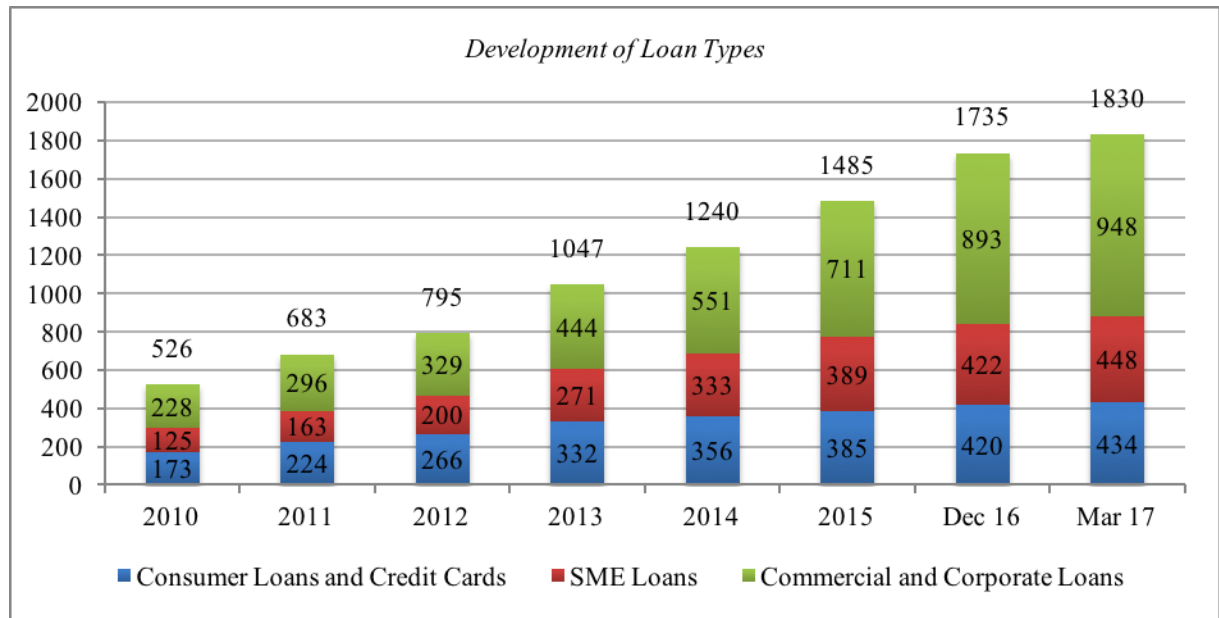


Figure 1. Development of Loan Types in Turkey

Source: Basic Indicators of the Turkish Banking Sector, 2017

Delays in credit repayment also reduce banks' willingness to lend to SMEs. As can be seen in Table 2, the ratio of overdue receivables in SME loans was 4 percent as of December 2015. The rate of overdue receivables for the total loan stake is 3.2 percent. The highest rate of overdue receivables is micro-enterprises with 5.7 percent. This ratio is 3.6 percent in small businesses and 3.1 percent in medium-sized enterprises.

Table.2 SME Cash Loans (Billion TL)

	2010	2015	Average Annual Change	Overdue receivables / Total Loans (2015)
<i>Total Credit Stock</i>	526	1485	25	3.2
<i>SME Cash Loans</i>	125	388	30	4
<i>Micro Enterprises</i>	41	99	23	5.7
<i>Small Enterprises</i>	34	132	35	3.6
<i>Medium Size</i>	50	157	31	3.1

Source: https://www.tbb.org.tr/Content/Upload/Dokuman/7339/TBB_bilgi_notu_Kobi.pdf

Even though angel investors and venture capital firms are relatively new concepts for Turkey, they are the commonly used financing sources. According to European Business Angel Network (EBAN) after United Kingdom, Spain, Finland, Germany, Turkey is the biggest player in the Early Stage Investing market with €47 million of investment in 2016.

According to this report business angel activities grow steadily in Turkey. But when we compare the amount of angel investment with the gross national product, the situation suddenly changes and Turkey lags behind many other countries (EBAN Statistics Compendium, 2016).

Venture capital was not a type of financing used in Turkey until the beginning of 2000. The most important reason for this situation is that the economic crisis experienced in 1990s limited this type of investment. The first venture capital fund was founded by a state owned bank, Vakıfbank in 1996 (Sahbaz, 2010). There are currently 8 venture capital investment partnerships in Turkey and these firms support all type of investments, especially the projects at the research and development stage which are also the most risky to finance due to high uncertainty high uncertainty associated with success. These type of funds finance product development process or financially support the companies in stage of market presentation and they make also replacement or corporate rescue financing (Turkish Capital Markets Association, 2017).

After mentioning two types of funding sources used by small and medium sized enterprises, angel investors and venture capital, the following sections will explain entrepreneurial indices, which have emerged as a new source of financing.

4. Methodology

4.1 German Entrepreneurial Index

In order to provide financing for SMEs, alternative funding sources have been sought and new players have been included in the current financial market. For example, the British Business Bank and the German development bank KfW have been established to meet external financing needs of SMEs (Fraser, Bhaumik and Wright, 2015). GEX has also taken its place on the German financial market as a new index established for such companies.

GEX is a style index that includes all owner managed firms listed in the Prime Standard segment of the Frankfurt Stock Exchange. The entrance criteria of the GEX can be listed as follows (Achleitner, Kaserer, Ampenberger and Bitsch, 2009):

1. Owner dominance
2. Maximum post- IPO age
3. Minimum liquidity
4. Prime Standard listing
5. German headquarters

Owner-dominated firm refers to a firm whose executive and supervisory board members have voting rights between 25 and 75 percent. Besides that, in order to be listed on this style index, the initial public offering of the firm should not exceed ten years. Another criteria is related to the amount of liquidity. The essential criteria of owner dominance, prime standard listing and German headquarters guarantee a minimum of liquidity and high level of transparency (Moldenhauer, 2006). The companies listed in GEX don't grow too much as the sale of minority shares only provides a limited equity injection (Achleitner, Kaserer, Ampenberger and Bitsch, 2009). Apart from these, there are basic criteria about the place where the head office is located and the stock market where the company is quoted. The headquarters must be in Germany and the common stock of GEX companies should be listed in the Prime Standard of the Frankfurt stock exchange.

The weight of the individual stocks in GEX is determined by their market capitalization which is calculated by considering the free-float method, and index is calculated with the formula of chain-linked Laspeyres. By chain-linked it is meant that for each period, the base used is the weight from the previous period (Deutsche Börse Group, 2005).

$$\text{Index: } Kt \frac{\sum_{i=1}^n (p_{it} \cdot q_{iT} \cdot \text{ffit} \cdot \text{ciT})}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Basis} \quad (1)$$

In the formula, c is current correction factor of company i at time t and ff is free float factor of class i at time t . The closing price of the share i on the trading day prior to the first inclusion in an index of the German stock exchange is indicated by p_{i0} . On the other hand p_{it} is the price of the share i at time t . q_{i0} symbolizes the number of company shares on the dealing day prior to the first inclusion in an index of the German Stock Exchange and q_{it} is the number of underlying shares of company i at time t . And lastly, K stands for the index specific concatenation factor, valid from the concatenation time t .

The backward performance of the GEX in the past 13 years can be seen in Table 3. Historical price trends may indicate the future direction of an index. GEX therefore deserves special attention. The price changes in the table give us a clear idea of how GEX is performing. Since the beginning of 2005, the GEX has grown by more than 240% by the end of 2017.

Table. 3 Development of German indices from 2005 to 2017

GEX					
<i>Year</i>	<i>Beginning of the year</i>	<i>End of the year</i>	<i>Highest price</i>	<i>Lowest price</i>	<i>Change</i>
2005	1.061,09	1.436,78	1.436,78	1.061,09	35,41%
2006	1.436,78	1.812,90	1.942,26	1.436,78	26,18%
2007	1.812,90	2.331,33	2.460,07	1.812,90	28,60%
2008	2.331,33	1.107,30	2.327,94	964,41	-52,50%
2009	1.107,30	1.492,75	1.502,88	917,98	34,81%
2010	1.492,75	1.731,85	1.737,85	1.372,74	16,02%
2011	1.731,85	1.057,33	1.863,43	1.013,30	-38,95%
2012	1.057,33	809,52	1.264,84	765,03	-23,44%
2013	809,52	1.031,99	1.085,68	809,52	27,48%
2014	1.031,99	1.186,94	1.262,88	1.031,99	15,01%
2015	1.186,94	1.845,07	1.859,14	1.167,69	55,45%
2016	1.845,07	1.723,53	1.807,88	1.442,86	-6,59%
2017	1.723,53	2.564,65	2.565,66	1.723,53	48,80%

Source: <https://www.boerse.de/>

DAX, CDAX, MDAX, SDAX and TecDAX are some of the indices of German Stock Exchange. DAX is the equity index that measures the performance of the 30 largest companies in terms of market capitalization and MDAX consist of the 50 medium sized companies trading on the Frankfurt Stock Exchange. On the other hand, CDAX comprises only the shares of domestic companies that listed in the Prime and General Standard segments. The other index, SDAX, is an index for companies that are slightly smaller than other companies and TecDAX comprises the shares of the 30 largest and most liquid tech companies (Guide to the Equity Indices of Deutsche Börse AG, 2019). Comparing GEX with these indices gives us more accurate results about the success of this index. As shown in Table 4, the average return of the GEX between 2005 and 2017 is approximately 13%, which is more than the average returns of DAX and CDAX over the same years. Although it exists for only short time and the companies quoted on this index are medium-sized companies, GEX has become one of the fastest growing indices after 2008 crisis, leaving behind DAX and many other indexes. The GEX closed at 1107.30 points in 2008 trading session, and reopened at 1492.75 in 2009.

Table. 4 The Performance of German Stock Indices

	<i>GEX</i>	<i>DAX</i>	<i>CDAX</i>	<i>MDAX</i>	<i>SDAX</i>	<i>TecDAX</i>
<i>Average return</i>	0.1279	0.1095	0.1170	0.1583	0.1395	0.1687
<i>Max. return</i>	0.5544	0.2905	0.2926	0.3911	0.4578	0.6084
<i>Max. loss</i>	-0.5250	-0.4037	-0.4258	-0.4321	-0.4605	-0.4782
<i>Std. dev.</i>	0.3211	0.1886	0.1969	0.2294	0.2394	0.2713

Source: Author

GEX and TecDAX have maximum yearly losses with 52.5% and 47.82%, respectively. Additionally there is more volatility on the GEX and TecDAX compared to the DAX, CDAX, MDAX, and SDAX. The variation in the returns over these year is 32%. Hence, the annual yield ranges are high for both indices. The medium-sized companies listed on the GEX and the technological firms listed on TecDAX are the companies with very high risk taking capabilities. Medium-sized and innovative companies have less to lose and more to gain than bigger companies (Damodaran, 2008). As a result, these companies are more inclined to take risks and therefore their returns are more volatile.

4.2 Borsa Istanbul Emerging Companies Market (ECM)

In Turkey most of the small and medium sized companies are family businesses and as mentioned above the exact number of these businesses is not quantified. Although there are many entrepreneur family companies, those who can take advantageous positions are those that can export, are able to trade in foreign currency in the domestic market, reflect the increases in costs at the prices of their products and have a transparent and accountable management system. Because of their relevance for the Turkish economy, capturing the movement of these companies with above-mentioned features is of importance.

In 2015, 55.1% of Turkish exports and 37.7% of imports were made by companies that have between 1 and 249 employees. In exports, the share of micro-scale enterprises with 1-9 employees was 17.7%, while the share of small-scale enterprises with 10-49 employees was 20.3% and the share of medium-sized enterprises with 50-249 employees was 17.1%. The share of large-scale enterprises with more than 250 employees was 44.8%. According to the main activity of the initiative, 59.3% of the exports of SMEs were made by the commercial sector and 36% by the enterprises operating in the industry sector. These numbers reveal once again the importance of SMEs in Turkish economy (Turkish Statistical Institute, 2016).

Provision of price stability in Turkish lira is also important for such enterprises. The uncertainty that may arise in Turkish lira can cause problems for the enterprises, and as such for the economy. As a result, small and medium-sized enterprises that trade in foreign currency, especially in the domestic market, are not greatly influenced by the economic volatility due to price instability in TL. An index that includes all these companies is not significantly affected by the depreciation of the Turkish Lira. Therefore, this index, which is a financial investment instrument, will provide the investor high returns even if the economic conditions deteriorate.

Borsa Istanbul Emerging Companies Market is a stock market index based on the market capitalizations of small and medium sized companies having common stock that listed on the Borsa İstanbul. It was established to facilitate the funding of small and medium-sized companies. If companies cannot fulfill the requirements to be able to trade in BIST Stars or other basic indices, they can trade on ECM (Emerging Companies Market, Istanbul Stock Exchange Online Publication).

ECM was created for small and medium-sized enterprises to provide long-term, non-repayable resources. It offers the benefits of trading on BIST without having to reach a certain size. In addition to access to finance, this index offers many more benefits. These include pricing and provision of liquidity, withdrawal from partnership, recognition and credibility, institutionalization and secondary public offering.

The companies that will be trading in ECM must be in the status of a public limited company. In addition, according to the regulations of the Capital Markets Board, the total assets of the company to be traded on ECM must be at least TL 5.8 million and net sales should be TL 11.6 million. Another criterion concerns the market value of the shares offered to the public. These shares have a limit of 25 million TL for the market value. Other conditions such as profitability and minimum duration of activity required for star and major market applications are not sought in the ECM application. With 27 public offerings realized in ECM since the day it was founded, companies have obtained a source of 212 million TL. Five of these SMEs that grew up with the help of publicly funded sources, provided conditions after a certain period of time and were accepted into the Main Market. Entrance of SMEs to the capital market and facilitation of IPOs have a positive financial impact on SMEs. In addition, trading of SMEs in the entrepreneurial index will reduce SMEs' dependence on the banks (Emerging Companies Market, Istanbul Stock Exchange Online Publication). Table 6 shows the average monthly return and the average standard deviation for the nineteen companies traded on the Borsa Istanbul Emerging Companies market between June 2016 and March 2018. The comparison between the ECM Index and the BIST-30 Index reveals that the returns of ECM-trading companies are higher and also more volatile than those of companies listed on BIST-30. The companies used in this study that are listed on BIST-30 are selected randomly.

Table 6. The Performance of Borsa Istanbul Emerging Companies Market and BIST 30

<i>Firm-ECM</i>	<i>Average Return</i>	<i>Standard Deviation</i>	<i>Firm-BIST30</i>	<i>Average Return</i>	<i>Standard Deviation</i>
<i>BMELK</i>	2.8%	32.1 %	<i>ARCLK</i>	0.1%	5.9%
<i>POLTK</i>	4.6%	12.5%	<i>ASELS</i>	5.3%	9.5%
<i>ETILR</i>	8.1%	23.9%	<i>BIMAS</i>	1.4%	5.2%
<i>YAYLA</i>	3.4%	30.2 %	<i>DOHOL</i>	5.7%	20.6%
<i>IZTAR</i>	2.9%	14.2 %	<i>EKGYO</i>	-0.6%	6.2%
<i>SEKUR</i>	7.7%	14.4%	<i>EREGL</i>	5.1%	8.1%
<i>RODRG</i>	1.4%	19.7%	<i>SAHOL</i>	0.4%	4.6%
<i>SAYAS</i>	-1.4%	9.9%	<i>KRDMD</i>	6.3%	13.1%
<i>TACTR</i>	-0.3%	9.3%	<i>KCHOL</i>	0.6%	6.6%

<i>TKURU</i>	-0.2%	7.5%	<i>KOZAL</i>	7.6%	17.6%
<i>DENGE</i>	16.2%	53.2%	<i>OTKAR</i>	0.1%	10.6%
<i>ETILR</i>	8.2%	23.9%	<i>PGSUS</i>	4.3%	12.5%
<i>MCTAS</i>	3.4%	10.1%	<i>PETKM</i>	3.8%	8.2%
<i>MEGAP</i>	5.1%	18.3%	<i>SISE</i>	2.5%	6.5%
<i>SANFM</i>	2.1%	12%	<i>TAVHL</i>	3.5%	7.4%
<i>BEYAZ</i>	20.2%	40.7%	<i>TKFEN</i>	4.4%	11%
<i>OSMEN</i>	1.3%	19.8%	<i>THYAO</i>	5.7%	10.5%
<i>VANGD</i>	0.095	0.377	<i>TUPRS</i>	3.5%	6.4%
<i>BRKSN</i>	0.029	0.134	<i>TTKOM</i>	0.5%	6.2%

Source: Authors Calculation. The data is collected from www.investing.com

5. A Comparison of GEX and ECM

GEX and ECM are style indices and both have a short history. Although these two indices have been developed for SMEs, they are very different in their functioning.

Even though GEX was developed for small and medium-sized businesses, it includes medium-sized family companies. A family business that holds the most shares of a company, whether it is a mid-sized or a large company, can trade on GEX. For example, if a company is traded on TecDAX and meets the criteria for trading in GEX, it can also be traded on GEX. This is not the case for ECM. Only the companies that cannot be traded on the main indices can be traded on ECM and companies that have reached a certain size have to leave it. Therefore, we cannot say that the GEX index is an index only for small and medium-sized companies. But this holds true for the ECM. It seems that GEX includes most of the technology companies that have reached a certain size, and since the companies in this sector are promising more growth and development, they are considered entrepreneurs and included in this index. On the other hand, ECM was established with the aim of collecting funds from capital markets for small and medium sized companies with growth and development potential.

Another difference arises from the relationship between the index of large enterprises and the index of small and medium-sized enterprises. Since a company trading on the GEX may be able to trade on a different index, including large companies, any problem affecting other indices also affects GEX. Of course, there are also positive aspects of this situation. Successful mid-sized family businesses, which are also listed on other indices as well as GEX, have a positive influence on the development of GEX, because an index that includes experienced large and mid-sized companies gives investors more confidence than an index that only small companies have.

The IPO, which may bring with it high transaction costs can act as a barrier for companies that desire to be traded publicly. To simplify this process, KOSGEB covers the costs associated with the public offering of companies wishing to trade on the Borsa Istanbul Emerging Companies Market with a non-refundable amount of up to 100,000 TL. In addition, many exceptions have been granted to encourage companies to finance themselves through the public offering. For companies traded on the ECM, the Capital Markets Board's registration and transaction fees have been reduced to one-tenth compared to companies trading on the Star Market and Main Market. This is in stark contrast to Germany. In an environment where even large companies such as Dr. Oetker, do not want to open to the public, it does not appear to be easy to incentivize small businesses to become publicly traded companies since there are no incentives for companies that want to trade on GEX. These companies also have to meet certain conditions like other companies that trade on other indices. Arguably the most important reason why SMEs in Germany do not want to be opened to the public is that they can easily provide their financing needs in other ways.

All these differences listed above make two entrepreneurial indices unique. However, there are many aspects that the ECM index needs to learn from GEX in terms of index inclusion criteria and functioning. Converting the ECM into an index that also includes mid-sized entrepreneurial family companies that trade also on other main indices rather than just an index involving only small companies could increase ECM's success. In addition, there could be an annual limit for companies wishing to trade on ECM Index. Either a specific date should be given as in GEX, which is 10 years; or the companies should be removed after several years of continued failure.

6. Conclusion

The aim of this study is to shed light on the financing activities of small and medium-sized enterprises in Turkey and Germany. Early stage entrepreneurial activities in Turkey were much lower than in other developing countries, while the number of new established businesses is relatively high. The lack of financial support, inadequate government programs that provide knowledge on technology and tax incentives, and insufficient intellectual property rights can be given as reasons for this. On the other hand, there were favorable entrepreneurial conditions that are promising in two aspects: the positive attitudes of people towards entrepreneurship and the existence of market openness to rapid change. Today, the situation has changed and thanks to these favorable entrepreneurial conditions and adequate government support and incentives, early entrepreneurial activities have increased.

Small and medium-sized companies have begun to find new funding sources to meet their financing needs. One of them is the increase of capital through IPO. In order to make it easier for SMEs to enter the capital market, entrepreneurial indices have been created. Some precautions have been taken to enable SMEs to enter the stock market and it has been ensured that these companies have many different privileges than large companies. Transaction costs have been lowered, free independent auditing and market consulting services have been provided, information on the IPO process has been detailed, and these companies have been encouraged to be included in entrepreneurial indices.

In the context of the analysis about financing activities of SME's, the role of two indices from Turkey and Germany – GEX and ECM – were analyzed. GEX and ECM are indicators of the performance of medium-sized companies in German and Turkish stock markets. Their aim is to help small and mid-sized family businesses to capitalize that are strategically important for adding value, income and employment to the economy. In this study, the success of these indices was examined, similar and different aspects of the two indices explained and some suggestions made for the development of the ECM. The limitation of this study is the lack of access to detailed company information listed on the Borsa Istanbul Emerging Companies Market. For these companies, only monthly returns were achieved, and no information was collected on their financial ratios and management performance that could serve as a starting point for future investigations. In the future, the success of these indices can be better measured as more data and information is exchanged across these indices.

REFERENCES

- Ayyagari, M., Thorsten, B., § Demirgüç-Kunt, A. (2007). "Small and Medium Enterprises across the Globe," *Small Business Economic* 29:415-434.
- Achleitner, A-K., Kaserer, C., Ampenberger, M., § Bitsch, F. (2009). "The German Entrepreneurial Index (GEX) - A Primer on an Ownership-Based Style Index in Germany" *CEFS Working Paper* 13.
- Basic Indicators of the Turkish Banking Sector. (2017).
- Beck, T. Demirgüç-Kunt, A., § Levine, R. (2005). "SMEs, Growth, and Poverty: Cross-Country Evidence," *Journal of Economic Growth* 10:199-229.
- Birch, D.L. (1990). "Sources of Job Growth and Some Implications. In: Kasarda, J. (Ed.), Jobs Earnings, and Employment Growth Policies in the United States. *Kluwer Academic Publishers*, Norwell, MA, 71-76. Center for European Economic Research and the Institute for SME Research.
- Cumming, D. (2010). "Venture Capital: Investment Strategies, Structures, and Policies" *The Robert W. Kolb Series in Finance*, Wiley.
- Damodaran, A. (2008). "Strategic Risk Taking: A Framework for Risk Management", *Pearson Prentice Hall*, 363.
- Deutsche Börse Group Technical Report. (2005). "Guide to the German Entrepreneurial Index (GEX)".
- Denis, D.J. (2004). "Entrepreneurial Finance: An Overview of the Issues and Evidence" *Journal of Corporate Finance* 10:301-326.
- EBAN Statistics Compendium. (2016).
- Emerging Companies Market, Istanbul Stock Exchange Online Publication, <http://www.borsaistanbul.com/en/initial-public-offering/listing/equities/emerging-companies-market>
- European Small Business Finance Outlook. (2016).
- Fraser, S., Bhaumik, S.K., § Wright, M. (2015). "What Do We Know about Entrepreneurial Finance and its Relationship with Growth?" *International Small Business Journal* 33: 70-88.
- Guide to the Equity Indices of Deutsche Börse AG (2019). Deutsche Börse, Version 9.2.4.
- Moldenhauer, B. (2006). "Insider Ownership, Corporate Performance and the German Entrepreneurial Index (GEX) – Practical and Academic Evidence from Germany" *CEFS Working Paper*.
- OECD Small and Medium Enterprise Outlook (2000).
- Sahbaz, U. (2010). "How to Foster a Venture Capital Industry in Turkey? A Design for a Public Fund of Funds" *Harvard Kennedy School Second-Year Policy Paper*.
- Smart, S.B., Megginson, W. L., § Gitman, L. J. (2006) "Corporate Finance" Cengage Learning.
- Turkish Capital Markets Association Online Publication (2017).
- Turkish Statistical Institute. (2015). "Small and Medium Sized Enterprises Statistics" <http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=21864>
- Wong, A.Y. (2002). "Angel Finance: The Other Venture Capital" *Working Paper, University of Chicago*.